

POPOVA, A.

1. "The Struggle for a Scientific Conception in Russian Geography," by Y. I. KUDACHIKOV and C. K. KRYZANOV (Bucharest); English Summary; pp 2-6.
2. "Geographical Contributions to the Understanding of the Struggle of the Russian People's Republic," by V. A. KILIN, ENIN (Bucharest); English Summary; pp 6-12.
3. "The Agriculture of the Russian People's Republic in the Phase of the Construction of Socialist Construction," C. GILTOVICH; pp 23-30.
4. "The Dniebo Delta," by GUZHENKO, V. S. STANISLAV, A. KUDACHIKOV, Y. I. KUDACHIKOV and C. K. KRYZANOV (Bucharest); English Summary; pp 31-41.
5. "Concerning the Fauna of the USSR in the Journals of Fauna," in the Journal of Zoology, in the Journals of Fauna (Russian); English Summary; pp 42-48.
6. "The Geographical Representation of the Fauna of the USSR," by Y. I. KUDACHIKOV and C. K. KRYZANOV (Bucharest); English Summary; pp 49-51.
7. "Methods and Results of Work in the Zoological Geography in the USSR," by Y. I. KUDACHIKOV and C. K. KRYZANOV (Bucharest); pp 52-53.
8. "The Preparation of a Faunal Collection," Conf. Univ. R. CIVILIS (Bucharest); pp 54-55.
9. "Literary for an Expedition," Prof. G. I. KUDACHIKOV (Bucharest); pp 56-58.
10. "On the Fauna of the USSR," Prof. I. KUDACHIKOV and C. K. KRYZANOV (Bucharest); pp 59-75.
11. "The Place of the Fauna," Prof. I. KUDACHIKOV (Bucharest); pp 76-81.
12. "Fauna of the USSR," Prof. I. KUDACHIKOV (Bucharest); pp 82-83.

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- No 1, Jan-Feb 62
- Bucharest, HUMAN (North Georgetown-7023491). No 1, Nov 62
1. The struggle for a scientific conception in Human Geography; I. HODURICH and C. JINCAU (Bucharest); English Summary, pp 3-6.
2. Geophysical Contributions to the Understanding of the State of the Romanian People's Republic; GEORGE STANCU (Bucharest); English Summary, pp 6-22.
3. The Architecture of the Romanian People's Republic in the Phase of the Construction of Socialist Construction"; C. GELZARESCU; pp 23-30.
4. "The Danube Delta," N. GEMAZARIC, G. SANCULESCU, A. IOVITA and C. HODURICH, Scientific Reports collected by the Institute of Geography, Bucharest; English Summary, pp 3-11.
5. "Concerning the Presence of Eozoa in the Channels of Fehreze in the Tancal Palace Against Lake I. MINOLAH (Iasi); English Summary, pp 42-48.
6. "Concerning the Presence of Eozoa in the Channels of Fehreze in the Tancal Palace Against Lake I. MINOLAH (Iasi); English Summary, pp 42-48.
7. "Methods and Results of Work in the Teaching of Geography in the High Schools; Prof. PAVELUTIN CREP (Bucharest); pp 52-53.
8. "The Preparation of a Rural Population;" Conf Unty R. GIVLESCU (Bala Baneu); pp 53-60.
9. "Industry for an Excursion;" Prof. GHEORGHE CRISTESCU (Bucharest); pp 61-68.
10. "Latin America, Current Economic and Political Aspects;" V. GULU (Bucharest); pp 69-75.
11. "The Role of the Earth;" Prof. I. DUSZA (Bucharest); pp 77-81.
12. "Western Service," A. IOVITA (Bucharest); pp 81-82.

POPOVA, A.

524

771.513 : 547.962.9 : 541.183.23 : 675.024

Interaction of Gelatin with Inorganic Tanning Agents. A. POPOVA and A. PASYNSKY. *J. Appl. Chem., U.S.S.R.*, 1952, 25, 18-22. The quantities of aluminum and chromic oxides adsorbed by gelatin from potassium and chrome alums, and from potassium dichromate have been determined from the difference between the potentiometric curves obtained by titrating mixtures of gelatin and the tanning agents with alkali, and those which would be arrived at by adding the curves for the titration of the components with alkali separately. It has been established that the polar, non-ionogenic groups in gelatin play a considerable part in the co-ordination sphere of the aluminum and chromium atoms bound by gelatin. *Brit. Abstr.*



*BC*

*B-II-1*

**Alcoholysis of esters.** I. S. LUTSCHUK and  
A. FROTA (Zhurn. Org. Khim., 1967, 3, 148-153).  
Bornyl and BnOAc are obtained in 90% yield by  
heating the bornyl acetate fraction of pine oil with  
2 vols. of EtOH in presence of 5% of HCl (3 hr. at  
70°). Low satisfactory results are obtained when  
BuOH is used in place of EtOH. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ESOM NOMANY  
ESL187 ONE QNY 151

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CP

Alcoholysis of esters. I. S. Le'chuk and A. Popova, *Org. Chem. Ind. (U. S. S. R.)* 3, 148-53 (1937). Siberian pine-needles oil, contg. 30-25% borneol acetate (I), after distg. off of the pinene fraction gave a product contg. 70-55% I. This product was treated with 2-3 vols. of EtOH and BuOH in the presence of 2-20% (by vol.) of concd. HCl and H<sub>2</sub>SO<sub>4</sub> at various temps. and periods of time, giving 1-rotary borneol (II), m. 204° (C<sub>15</sub>H<sub>26</sub>) and AcOR<sub>1</sub> and AcOR<sub>2</sub>, resp. The alcoholysis is practically completed in 1 hr. The optimum conditions are: a concn. of 5% HCl with 2 vols. of EtOH at 70-80°, and 3 vols. of BuOH at 110° for 4 hrs. By this method the decompn. results in 91.0% II of the available I, with EtOH and 84.1% II with BuOH. About 20 references.

Chas. Blanc

16

ca

Ion antagonism and activation in alcohol fermentation.  
V. Kulikov and A. Popovs. *Microbiologiya* 2, 51-6  
(1933).—In fairly concd. *Wasser* soln. (25-30%), the  
presence of K salts, such as  $K_2SO_4$  (10%), slows the rate  
of alc. fermentation. If, to such a soln., there be added a  
Ca salt ( $CaSO_4$ ), the speed of fermentation considerably  
increases. Similarly, the addn. of  $CaSO_4$ , 0.4 g. to 100 cc.  
of a concd. molasses soln. (which normally contains  
 $K_2SO_4$ ), increases the speed of fermentation by 60%.  
H. Cohen

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND LETTERS

3RD AND 4TH LETTERS

5TH AND 6TH LETTERS

7TH AND 8TH LETTERS

9TH AND 10TH LETTERS

11TH AND 12TH LETTERS

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99TH AND 100TH LETTERS

CA

27

**Reaction of gelatin with plant tannins.** A. G. Pavlovskii and A. Popova. *Zhur. Priklad. Khim.* (J. Applied Chem.) **24**, 1107-8 (1951). The deviation from additivity of potentiometric titration curves of mixts. of purified gelatin with tannin (Kahlbaum pure and oak ext.) is assumed to be a measure of the degree of interaction of the 2 substances. The value of deviation is min. at pH 4.5, i.e. at the isoelec. point. The deviation increases with acidification while in alk. range it reaches a max. at about pH 8.5-9.5. At pH 10 the pure tannin binding amounted to 0.9 g./g. gelatin, while at pH 6-8 it is 0.5-0.6 g./g. For oak ext. at pH 6 it is 0.2-0.4 g./g. The isoelec. point of the protein is simultaneously shifted to pH 3.6 by tannin and to 4.4 by oak ext. G. M. Kosolapoff

1952



29

Potentiometric study of reaction of gelatin with tannins.  
A. G. Pasyanski and A. Popova. *Doklady Akad. Nauk S.S.S.R.* 76, 711-14(1951).—Alkalimetric titration curve of mixed gelatin and tannins differs from the individual curves of these substances. Plant tannins give deviations at all pH values, but the difference is least at pH 4-5; a max. is found near pH 8.5-9.5. Mineral tannins also give deviations: Cr alum gives essentially neg. deviation up to pH 7, and a pos. deviation at higher pH which rises with pH; Al alum gives a characteristic inflection near pH 5. These values are close to the zone of formation of basic salts of the metals. The ratio of the differences so obtained to the consumption of alkali by the tanning substance alone may give a measure of the amt. of tannin bound by gelatin. The results so obtained are somewhat higher than those obtained by leaching methods. Possibly with Cr and Al alum, the coordination of gelatin takes place at the polar nonionogenic groups (OH, peptide, etc.).  
G. M. Kosolapoff

CA

29

Reaction of gelatin with mineral tanning agents. II.  
A. Pashina and A. G. Pashinskii. *Zh. Prikl. Khim.* —  
U.S.S.R. Applied Chem. 25, 18, 22 (1952); cf. C. I. 45, 6109a. —  
The method of calc. of the extent of binding of a tannin  
by the substrate by the detn. of deviation of the titration  
curves of the mixts. from additive curves of individual  
components was applied to chrome alum and alum. The  
results are given graphically. The isoelec. point of the pro-  
tein is shifted from 5 to 3.8 by alum and 3.95 by chrome  
alum. Titrations in the acid region reveal almost no bind-  
ing but titration with alkali reveals considerable binding.  
at pH 8.10 it reaches 3.8. For more millimoles per g.  
G. M. Kosolapoff



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PROCESSES AND PROPERTIES INDEX

The Substitution of Iron and Cast Iron for Lead in Tower Sulphuric Acid  
 Production. E. Yushmanov and A. Popova (*Zhur. Khim. Promish. (J. Chem.  
 Ind.)*, 1937, 14, 1387-1389; *C. Abstr.*, 1938, 32, 1672).—[In Russian.] Iron  
 and cast iron slightly less so, is found to be more resistant to corrosion than  
 is lead, especially when high concentrations of NO<sub>2</sub> are present

ASME STEEL METALLURGICAL LITERATURE CLASSIFICATION

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THE CORROSION OF CAST IRON, IRON AND LEAD BY THE GAS PHASE OF THE TOWER SYSTEM. E. VASHCHANOV AND A. POPIVA. *J. Chem. Ind.* (U. S. S. R.) 15, No. 1, 13-14 (1958); cf. C. A. 52, 18729. The presence of NO<sub>x</sub> in the gas or liquid phase causes strong corrosion of Pb, but passivates Fe and prevents corrosion of app. made of this metal.  
H. M. LARSEN

COMMON ELEMENTS  
C  
O  
Fe  
Si  
Mn  
P  
S  
Al  
Cu  
Ni  
Zn  
Cr  
V  
Ti  
Nb  
Mo  
W  
Co  
Ni  
Pd  
Pt  
Ag  
Au  
Hg  
Tl  
Pb  
Bi  
Po  
At  
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ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION  
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PROCESSES AND PROPERTIES INDEX																																																											
<p><i>co</i></p> <p>The substitution of iron and cast iron for lead in tower sulfuric acid production. E. Yushmanov and A. Popova. <i>J. Chem. Ind. (U. S. S. R.)</i> 14, 1387-9(1937).—Fe, and cast Fe slightly less so, is more resistant to corrosion than Pb, especially when high concns. of NO<sub>2</sub> are present. H. M. Leicester</p>																																																											
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PROCESSING AND PREVENTIVE INDEX																			
<p>BC</p> <p>Replacement of lead by iron or cast iron in the tower sulphuric acid process. E. Juschanov and A. Popova (J. Chem. Ind. Russ., 1937, 14, 1387--1389).—Corrosion of Pb by <math>HNO_3-H_2SO_4</math> is &gt; that of boiler plate. Much of the Pb used in the <math>H_2SO_4</math> industry may be replaced by Fe. R. T.</p>																			
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CP

Corrosion of iron and cast iron in nitroses. E. Yushmanov and A. Popova. *Korrosiya i Zashchita Met* 4, No. 2, 151-4 (1968); *Khimiya Referat*, Zhur. 1, No. 11-12, 169 (1968); cf. C. A. 32, 6219<sup>1</sup>.—Investigations of the stability of Fe and cast iron in nitroses of H<sub>2</sub>SO<sub>4</sub> manif. showed that the dark metals cannot be used for the hot acid. The app. for the acid from the second and from the following Glover towers can be made of Fe or of cast iron. The hot nitroses passivate Fe much faster than the cold nitroses, and are, therefore, less dangerous to Fe. Cast iron (C 3.81%, Si 1.62%, Mn 1.14%, P 0.220% and S 0.0025%) is more dependable than boiler Fe, because the first period of corrosion in nitroses does not affect it, and its soln. velocity is small. W. R. Hunt

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

AS-514 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS





this disease was demonstrated by successful needle inoculations. (c) The following types of leaf spots differ from the foregoing and from one another in macroscopical characters, but their causes have not yet been established. (1) Seal-like spots, at first ring-shaped with a green centre; as they grow older they enlarge, the centre becomes of a uniform brown colour with the rest of the affected tissue, and the whole spot assumes the form of a raised seal. (2) Rounded, white, isolated spots with a narrow dark margin which later broadens and becomes still darker, when the central tissue usually breaks away. (3) Deeply lobate spots along the main veins, at first green, later yellowing. (4) Star and crescent spots, outwardly very similar to those known under the same names in America. These spots are usually scattered (singly or in groups) along the leaf margins. (5) Shapeless, depressed, brown, non-zonate spots, which gradually whiten, appear to be covered with a pellicle, extend in size, and occasionally coalesce; the affected tissue usually dries up and falls out. (6) Rounded, light brown spots, the affected tissues dying off concentrically. These spots frequently involve the greater portion of the leaf surface, leading to the death of whole leaves. It is thought possible that some of these types are but different stages of one and the same disease.

Indian tobacco is occasionally affected with mosaic; and it may also be attacked very occasionally by *Peronospora hyoscyami*, which, however, has no economic importance in the region in question.

AM

Among the stem diseases, the most prevalent is stated to be a collar rot caused by *Sclerotinia libertiana* [S. *sclerotiorum*]. The disease is most dangerous in seed-beds, the entire destruction of which by the fungus has been recorded in several cases. In 1927 a slight outbreak of *Fusarium tabacinum* Del. occurred; the main symptom was a well-marked constriction of the diseased stems at the collar, with the appearance on the surface of a pinkish efflorescence composed of falcate, hyaline spores with rounded ends. Most of the infected plants died. In 1928 the disease spread considerably in the affected plantation, from three well-defined infection foci. In the same year *Phyllosticta capsulicola* Sacc. was found attacking the seed capsules of *N. rustica* in another locality, this being stated to be a new record for the Ukraine; the fungus did not appear to do any appreciable damage. In seed capsules attacked by *Alternaria tenuis* the seed did not mature and its viability was very low. Although rather widespread, the root rot caused by *Thielaviopsis basicola* appears to be of minor economic importance, except on the Schweitzent variety, about 10 per cent. of which was infected (with a high mortality) in certain plantations. *T. basicola* was also found parasitizing the haustoria of the broomrape (*Orobanchaceae*) in the roots of the tobacco, to a much greater extent than the roots themselves. From the haustoria the infection spread

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upwards into the stems of *O. ramosa*, killing them before they seed. The broomrape was much more heavily infected on manured soil, the highest percentage (80.5) being observed in plots fertilized with sulphate of ammonia, against 21.1 per cent. on non-manured plots. The possibility of the biological control of broomrape by means of *T. basicola* is now being investigated. *Fusarium orobanchiae* was usually associated with this fungus on the broomrape.

KOSHKAROVA, D.D., mladshiy nauchnyy sotrudnik; POPOVA, A.A., kand.  
biolog.nauk; YEFREMOVA, R.Z., starshiy nauchnyy sotrudnik

Cultivation practices in the control of tobacco and makhorka  
diseases. Zashch. rast. ot vred. i bol. 9 no.3:21-22 '64.  
(MIRA 17:4)

1. Azerbaydzhanskiy institut zashchity rasteniy, Kirovabad (for  
Koshkarova). 2. Ukrainskaya opytnaya stantsiya po tabaku i  
makhorke, Priluki, Chernigovskaya obl. (for Popova, Yefremova).

ACCESSION NR: AT4040561

S/2564/64/004/000/0148/0150

AUTHOR: Popova, A. A.

TITLE: Growth of  $\text{Cr}_2\text{O}_3$  single crystals by the Verneuil method

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, v. 4, 1964, 148-150

TOPIC TAGS: chromium oxide, corundum, single crystal, crystal growth, Verneuil method, crystal defect, chromium oxide boule

ABSTRACT: The discovery of antiferromagnetic transitions in  $\text{Cr}_2\text{O}_3$  crystals has attracted considerable attention. The difficult problem of preparation of the charge for  $\text{Cr}_2\text{O}_3$  crystallization by the Verneuil method has been solved by calcining of chromium oxide at 1200C, then at 1400C. Actual crystal growth was carried out in the apparatus constructed by S. K. Popov [Sb. "Rost kristallov," v. II, Izd-vo AN SSSR, 1957, 140-209]. Crystals as large as 12 x 12 x 30 mm were obtained. Crystal forms are described and some macroscopic

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ACCESSION NR: AT4040561

growth defects of the boules (surface growth structures and twin interlayers) are shown. The microhardness of single crystals approached that of corundum. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 02Jul64

ENCL: 00

SUB CODE: SS

NO REF SOV: 003

OTHER: 004

Card 2/2

POPOVA, A. A.

"Bacterial Wilt of Makhorka," Biulleten' Nauchno-Issledovatel'skogo  
Instituta Tekhnologii i Makhorochnoi Promyshlennosti imeni A. I. Mikolana,  
no. 126, 1936, pp. 57-63. 69.9 K86

So: SIRA SI-20-53, 15 Dec 1953



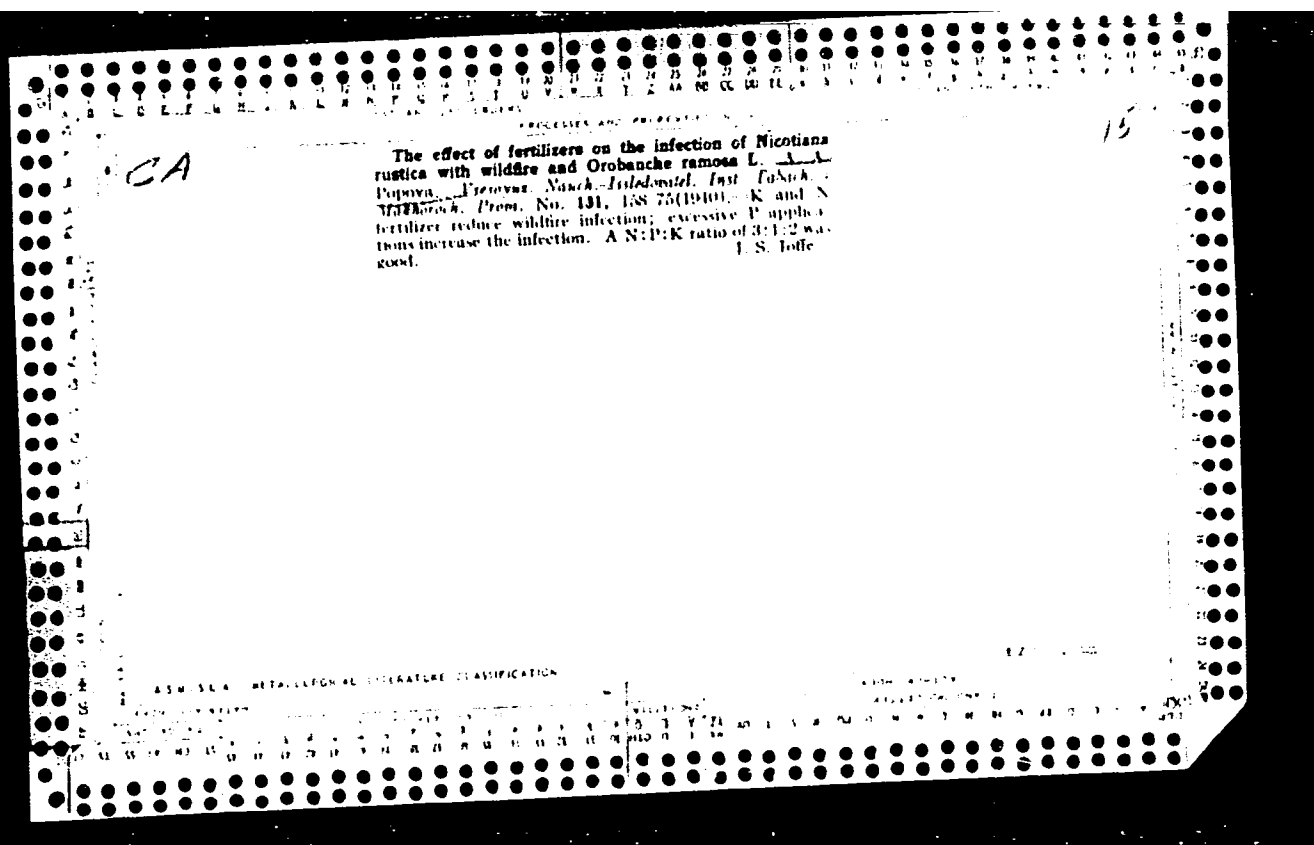
PROCESSES AND PROPERTIES INDEX

15

Influence of fertilizers upon the resistance of *Nicotiana rustica* to bacterial leaf spot. A. A. Popova and K. I. bel'syukova. *Trudy, Nizhegorodskiy gos. univ.* 1968, No. 135, pp. 68-69. Physiological acid fertilizers reduce the infection of "makhorka" on limestone soils and increase it on the chernozem soils. P alone increases the infection. K is the most effective fertilizer constituent in reducing infection. Nitrates are more efficient than ammonia sources of N in reducing infection. J. S. Joffe

ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION

E27



POPOVA, A. A.

POPOVA, A. A. "Thermal Method For Disinfecting Tobacco and Makhorka Seeds,"  
biulleten' Vsesoiuznogo Nauchno-Issledovatel'skogo Instituta Tabachnoi i  
Makhorochnoi Promyshlennosti Leni A. I. Mikolana, no. 141, 1940, pp. 3-24.  
69.9 K66

So.: SIRA, SI-90-53, 15 Dec. 1953

Григорьев (S. E.) & Корота (Mina A. A.). Изготовление извещателя  
расхода воды в почве как мера борьбы с болезнями табака и  
Махорки. [Treatment of seedling roots before transplanting in  
the control of Tobacco and Indian Tobacco diseases.]—ibid., pp.  
62-77, 1940. [English summary.]

In further experiments on the control of tobacco diseases (R.A.M.,  
xvii, p. 635) in which various chemicals were tested on a number of  
farms from 1937 to 1939, the best results were obtained by dipping  
the roots of tobacco and Indian tobacco (*Nicotiana glauca*) seedlings  
before replanting in 1 per cent. Bordeaux mixture. In tobacco, the  
incidence of bacterial 'yabovukha' (*Bacterium tabacum*) was almost  
completely controlled (the infection ranging from 0.8 to 5.9 per cent.  
in the untreated control, and from 0 to 2.7 per cent. in the treated  
lots), that of black root rot (*Thidiotrips basicola*) [see preceding  
abstracts] declined on the average 2.4 times (from 0.6 to 63.2 per cent.  
in the untreated control to 0.45 to 38.1 per cent. in the treated lots),  
that of tobacco mosaic 4 to 5 times (from 1.4 to 42 per cent. in the  
untreated control to 0 to 10.8 per cent. in the treated lots), and that  
of *Phyllosticta* [ibid., x, p. 628] from 2.1 per cent. in the untreated  
control to 0.3 per cent. in the treated lots. In Indian tobacco, the  
incidence of *Bact. tabacum* was reduced from 3.0 to 63.5 per cent. in  
the untreated control to 0 to 36 per cent. in the treated lots, and that  
of ring spot (virus) 1.6 times (from 3 to 68 per cent. in the untreated  
control to 0 to 48.5 per cent. in the treated lots). In regions of sufficient  
moisture, the dipping of seedling roots in disinfectant had no harmful  
effect on the subsequent development of tobacco and Indian tobacco  
plants in the field and sometimes even improved the yields, particularly  
when the seedlings were treated at the stage of normal maturity; in  
dry regions, however, the treatment resulted in thinner stands,  
especially if the seedlings were treated when too small or over-mature.  
The treatment is therefore recommended only for the wet zone or for  
low-lying, moist areas in the dry one.

Ророва (Мисс А. А.). Влияние удобрений на поражаемость Махорки бактериальной рыхлой и заразой. [The effect of fertilizers on the infection of Indian Tobacco with wildfire and Broomrape.] —ibid., pp. 158-175, 1940. [English summary.]

According to a survey completed in 1938, bacterial 'ryaboukha', referred to by the author as wildfire [*Bacterium tabacum*: see preceding and next abstracts] is the most prevalent disease of Indian tobacco (*Nicotiana rustica*) in the Ukraine, infecting 62.7 per cent. of the inspected area and occurring usually in a severe or moderately severe form. In field trials conducted from 1936 to 1938, it was found that the application of potassium and nitrogen fertilizers to the soil generally reduced the amount of wildfire in *N. rustica* whereas dressings of phosphate often increased it. While the application of a combined nitrogen-potassium fertilizer reduced the percentage of infected plants

from 48.7 in the untreated plots to 9.7, the addition of phosphate in various forms to that fertilizer resulted in much less satisfactory control. The best results in controlling wildfire as well as *Orobanchë ramosa* were obtained by applying the complete nitrogen-phosphorus-potash fertilizer in the autumn in the proportions 300 : 100 : 200, which reduced the percentage of infected plants from 7 in the untreated control to 0 and increased the average plant weight from 93.3 to 327.1 gm.; and 600 : 180 : 300, reducing the percentage of infected plants from 14 to 0.5 and increasing the average plant weight from 99.2 to 195.6 gm.

7  
 ПОРОВА (Мисе А. А.). Прием агротехники в борьбе с бактериальной  
 пнигой на Махорки. [Agrotechnical methods in the control of wildfire  
 of Indian Tobacco.]—ibid., pp. 176-195, 1940. [English summary.]

The following agricultural practices were found from 1932 to 1939 to exert an effect on the incidence of bacterial 'ryaboukha' or wildfire [*Bacterium tabacum*: see preceding abstracts] on Indian tobacco (*Nicotiana rustica*). Plants sown directly in the field were usually more affected (1.4 to 5.2 per cent.) than those transplanted from the seed-bed (1.0 to 3.4 per cent.), except in isolated years with a particularly early outbreak of wildfire, when the case may be reversed. Early planted Indian tobacco showed less infection (31.2 to 33.2 per cent.) than late planted (40.1 to 50.8 per cent.), the same difference being observed between the early and late dates of sowing (3.0 to 22.5 as compared with 5 to 35 per cent.). A reduction in the amount of the disease from 53.2 to 12.2 per cent. was obtained by loosening the soil between the rows every six days as compared with control plots in which weeds were cut down without disturbing the soil. With plants sown directly in the field, thinning out in the phase of the fourth to sixth leaf resulted in less disease than when postponed to later dates. Planting of protective rows decreased the amount of infection from 30 in the unprotected plants to between 5.3 and 12.5 per cent. Growers are advised to plant such protective rows to the windward, and to use plants taller than Indian tobacco. Indian tobacco cultivated on the same field for two to three years in succession suffered more from wildfire than when grown in rotation, particularly with leguminous crops.

POPOVA, A. A.

"Bacterial Wilt and Top Chlorosis of Makhorka Tobacco and Their Control." Cand  
Agr Sci, Khar'kov Order of Labor Red Banner Agricultural Inst imeni V. V. Dokuchayev,  
Min Higher Education USSR, Khar'kov, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended  
at USSR Higher Educational Institutions (16).

TRUKHAN, P.T.; TISHCHENKO, I.T.; STANKEVICH, L.A.; POPOVA, A.A.;  
DOBROVSKAYA, A.R.; prinalni uchastiye: PETROVA, M.P.;  
RYAZANSKAYA, A.A.; TRIGUBOV, S.P.; RABINOVICH, A.M.; GELER, S.S.

Use of  $\gamma$ -globulin for the prevention of infectious hepatitis in  
children's collectives. Report No.2: Results of epidemiological  
observation in children's collectives. Zhur. mikrobiol., epid. i  
immun. 42 no.11:138 N '65. (MIRA 18:12)

1. Kiyevskiy institut usovershenstvovaniya vrachey, Kiyevskaya  
gorodskaya sanitarno-epidemiologicheskaya stantsiya i sanitarno-  
epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva (for Trukhan,  
Tishchenko, Stankevich, Popova, Dobrovskaya). 2. Podol'skaya  
rayonnaya sanitarno-epidemiologicheskaya stantsiya Kiyeva (for  
Petrova, Ryazanskaya, Trigubov, Rabinovich, Geler).



L 25512-66 EWT(1)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJP(c) JD

ACC NR: AP6011400

SOURCE CODE: UR/0057/66/036/003/0521/0525

AUTHOR: Drokin, A.I.; Salanskiy, N.M.; Popova, A.A.; Smolin, R.P.

ORG: Institute of Physics of the SO AN SSSR, Krasnoyarsk (Institut fiziki SO AN SSSR)

TITLE: Barkhausen effect in magnesium-manganese ferrite single crystals

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 521-525

TOPIC TAGS: magnetic hysteresis, Barkhausen jump, single crystal, ferrite, magnesium, manganese, solid solution, temperature dependence

ABSTRACT: Magnetic hysteresis and the Barkhausen effect have been investigated at temperatures from 40 to  $-196^{\circ}\text{C}$  in magnesium-manganese ferrite single crystals of six different compositions. The crystals were grown in an oxyhydrogen flame by the Verneuil technique, using an apparatus similar to that described by K.S. Popov (Izv. AN SSR, Ser. fiz. 10, 505, 1946). The compositions of the materials (expressed in mole percent of  $\text{MgO}$ ,  $\text{MnO}$ , and  $\text{Fe}_2\text{O}_3$ ) ranged between 7.5 and 25%  $\text{MgO}$ , 25 and 55.5%  $\text{MnO}$ , and 33.5 and 50%  $\text{Fe}_2\text{O}_3$ . Two of the samples contained 50 mole percent  $\text{Fe}_2\text{O}_3$ . All the crystals contained small quantities of hausmannite. Most of the measurements were made on  $0.2 \times 1.5 \times 10^{-3}$  mm rectangular rods cut with the long axis in a [100] direction and the large face parallel to the (100) planes. The Barkhausen jumps were recorded during slow reversal of fields ranging in strength from 40 to 80 Oe. The hysteresis loops were highly rectangular at all temperatures, the squareness ratio in

Card 1/2

UDC: 536.12

L 25512-66

ACC NR: AP6011400

one case being 98.1%. For all the crystals the field distribution of Barkhausen jumps (number of jumps per unit change in the magnetizing field as a function of the magnetizing field) exhibited two sharp maxima at fields corresponding to the bends of the hysteresis loop. It is suggested that these maxima may be associated with nucleation and the disappearance of domain structure. The amplitude distribution of the Barkhausen jumps was approximately exponential in all the materials. The temperature dependence of the Barkhausen jump amplitude distribution for the two materials containing 50%  $\text{Fe}_2\text{O}_3$  was anomalous. In the other four materials the numbers of Barkhausen jumps of all sizes increased with decreasing temperature, the number of jumps remaining approximately constant between about  $-160$  and  $-80^\circ\text{C}$  and varying greatly with the temperature at both lower and higher temperatures. It is suggested that the existence of a temperature interval in which the number of Barkhausen jumps is temperature independent may be of use in the design of low noise devices. In the two materials containing 50%  $\text{Fe}_2\text{O}_3$  the number of Barkhausen jumps of all sizes decreased rapidly with decreasing temperature, and at the lowest temperatures the Barkhausen effect could not be observed at all, although hysteresis loops were present. No explanation is offered for this anomalous behavior. Orig. art. has: 5 figures and 1 table.

SUB CODE: 20

SUBM DATE: 14Apr65

ORIG. REF: 008

Card

2/2

PB

TRUKHAN, P.T.; POPOVA, A.A.; Prinimali uchastiye: DOMBROVSKAYA, A.R.;  
GROSMAN, Z.M.; STROMILO, L.I.; SEGAL', E.M.

Globulin immunization of schoolchildren to prevent infectious  
hepatitis. Report no.1: Reactions following the introduction  
of gamma glcbulin. Zhur. mikrobiol., epid. i immun. 41 no.10:  
143-144 '64. (MIRA 18:5)

1. Kiyevskiy institut usovershenstvovaniya vrachey i Sanitarno-  
epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva.

POPOVA, A.A.

Growing chromium oxide crystals by Verneuil's method. Post  
krist. 4:148-150 '64. (MIRA 1788)

POPOVA, Ana

"The use of aeromethods in geobotanic studies in the Volga-Antubinsk Meadow and in the Delta of the Volga River" by L.S.Rodman. Reviewed by Ana Popova. Problema geog 9:360-362 '62. (publ. '63)

*Popova, A.A.*

~~USSR~~/Solid State Physics - Morphology of Crystals.  
Crystallization.

E-8

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11809

Author : Ikornikova, N.Yu., Popova, A.A.

Inst : -

Title : Chemical Etching of Corundum Rods.

Orig Pub : Tr. In-ta kristallogr. AN SSSR, 1956, vyp. 12, 119-131

Abstract : A crystallographic study was made of the matte bands, that are formed on surfaces of etched corundum rods. The etching of disoriented rods was carried out in solutions of various substances at higher temperatures. It is shown that during the process of etching the surface of the rods is covered by faces of the same crystallographic band, whose axis coincides with the axis of growth of the rod or is close to it. The faces (0001), (11 $\bar{2}$ 0), (10 $\bar{1}$ 1) are characterized in this case by multi-facet etching figures. On the second-degree faces, one usually observes two-facet

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SOV/70-3-6-13/25  
AUTHORS: Belov, K.P., Popova, A.A. and Talalayeva, Ye.V.  
TITLE: The Electrical and Galvanomagnetic Properties of Single Crystals of Manganese Ferrite (Elektricheskiye i gal'vanomagnitnyye svoystva monokristallov ferrita margantsa)  
PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 6, pp 733-9 (USSR)  
ABSTRACT: The temperature dependence of the electrical resistance and the longitudinal galvanomagnetic effect in single crystals of manganese ferrite have been measured. The temperature dependence of the resistance is complicated. Near the Curie point on the lines  $\log r (1/T)$  breaks are observed which have a step form. It is supposed that these steps arise because at the Curie point crystals of manganese ferrite transform to a degenerate electron state. It is established that the dependence of the longitudinal galvanomagnetic effect on temperature, field and magnetisation is analogous to the dependence observed in metal ferromagnetics. The crystals of  $MnFe_2O_4$  used were made by the Verneil process and X-ray and chemical analysis were used to establish the orientation and texture of the specimens which were rods of about 0.2 cm<sup>2</sup> cross-section and 1 cm length. The specific

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SOV/70-3-6-13/25

The Electrical and Galvanomagnetic Properties of Single Crystals of Manganese Ferrite

resistances  $r$  were of the same order as that of the polycrystalline material ( $1 \text{ k}\Omega\cdot\text{cm}$ ). The conductivity is associated with the occurrence of ions in two valency states in alternation in certain directions. The much smaller conductivity observed here than in the case of magnetite is a consequence of the presence of  $\text{Mn}^{+2}$ ,  $\text{Mn}^{+3}$  and  $\text{Mn}^{+4}$  ions in the same set of equivalent positions and the absence of  $\text{Fe}^{+3}$  ions. A graph of the conductivity against temperature is given.  $\log r$  against  $T^{-1}$  is roughly a straight line but is broken into regions. Each can be described by  $r = A \exp dE/kT$  where  $dE$  has a different value for each of six sections, namely 0.30, 0.26, 0.20, 0.32, 0.50 and 0.32 eV. The region near the Curie point (near  $10^3/T = 1.8$ ) was studied more closely. It is thought that on the transition from the paramagnetic state to the ferromagnetic the semiconductor passes through a state of electronic degeneracy (as in a metal) and then becomes a semi-conductor again. The slope of the line  $\log r(1/T)$  should be less in the ferromagnetic state than in the paramagnetic.

Card2/3

SOV/70-3-6-13/25

The Electrical and Galvanomagnetic Properties of Single Crystals of Manganese Ferrite

As in the case of most ferromagnetics, the longitudinal galvanomagnetic effect in the region of technical magnetisation has a positive sign. With increasing temperature the sign changes to negative at lower and lower temperatures until at 270 °C the sign is always negative. The effect is also plotted out as a function of the square of the specific magnetisation.

There are 10 figures, 1 table and 6 references, 4 of which are Soviet, 1 French and 1 English.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography of the Ac.Sc.USSR) and Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (University im. M. V. Lomonosov)

SUBMITTED:

July 12, 1958

Card 3/3

24(4)  
AUTHOR:

Popova, A. A.

SOV/20 121-3-16/47

TITLE:

The Production of Single Crystals of Ferrites According to the Method by Verneuil (Polucheniye monokristallov ferritov metodom Verneylya)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 3, pp 453-454 (USSR)

ABSTRACT:

Up to the present, the properties of the ferrite materials were investigated for the most part on polycrystalline specimens or on small crystals which were grown in a melt. In the Institut kristallografi AN SSSR (Institute of Crystallography AS USSR) ferrite single crystals were produced in an oxygen-hydrogen flame according to Verneuil's (Verneyl) method. For this purpose an apparatus constructed by S. K. Popov (Ref 3) was used. The initial material for these investigations was produced by calcination of a mixture of iron-ammonium alum and of sulfates of bivalent salts. The crystals were grown from mixtures containing various quantities of the oxides of Mn, Co, Ni, Zn, Mg - Mn, Mn - Zn, and Ni-Zn. The crystals had diameters of up to 7 - 8 mm and lengths of up to 50 mm (in some cases of up to 90 mm). The monocrystalline properties of the specimens were confirmed

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The Production of Single Crystals of Ferrites  
According to the Method by Verneuil

SOV/20-12: 3-16/47

by X-ray investigations and by goniometric measurements. The hardness of the crystals amounted to 6 - 6.5 according to the Moos scale. In order to obtain the degree of homogeneity in the longitudinal direction, the crystals were analyzed chemically. The results of these investigations are given in a table. According to these data, the crystals have a sufficiently homogeneous composition. Nevertheless, there is a slight tendency towards an increase of the content of Hausmannite in the direction perpendicular to the basis of the crystals. The difference of the  $Mn_3O_4$  content is very insignificant with the only exception of the upper parts of the crystals. There are 1 figure, 1 table, and 5 references, 1 of which is Soviet.

PRESENTED: February 17, 1958, by A. V. Shubnikov, Academician

SUBMITTED: February 12, 1958

Card 2/2

S/058/62/CCC/004/094/160  
A061/A101

AUTHOR: Popova, A. A.

TITLE: Orientation of single crystals of some ferrites

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 9-10, abstract 4E80 (Sb.  
"Rost kristallov. T. 2", Moscow, AN SSSR, 1959, 84-87)

TEXT: It is shown that the goniometric method can be used to determine the crystallographic orientation of ferrite single crystals grown by Verneuil's method. The Co ferrite single crystal is formed by three simple basic forms {111}, {110}, {001}. The axis of growth coincides with one of the  $L_2$  axes. The Mn ferrite crystal is formed by simple forms {111} and {001}. The axis of growth coincides with that of stress for one of the  $L_3$  axes. ✓

[Abstracter's note: Complete translation]

Card 1/1

POPOVA, H. H.

PHASE I BOOK EXPLORATION: 30V/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskima svoystvam ferritov i fizicheskima osnovam ikh primeneniya. 3d, Minsk, 1959  
 Ferrity: fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites: Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: M. M. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor Ye. I. Kondorskiy, Professor; A. M. Polakovsky, Professor; R. V. Telesnin, Professor; G. A. Stetskiy, Professor; M. N. Shol'ts, Candidate of Physical and Mathematical Sciences; E. M. Smolyarenko; and M. A. Volskiy. Ed. of Publishing House: S. Kholyavskiy; Tech. E. I. Volokhinovich.

PURPOSE: This book is intended for physicists, physical chemists, metallurgists, and engineers in the field of ferrites. It is intended to be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous reactivity, problems in magnetic anisotropy, magneto-optical properties, physical principles of ferroresonance, magneto-optical circuits, anisotropy of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Alukov, M. J. Theory of the Rectangular Hysteresis Loop	23
X Turov, Ye. A., and A. I. Mitsek. Theory of the Temperature Dependence of the Magnetic Anisotropy Constant of Ferronagnetics and Ferrites	28
Vlasov, R. V., and B. Kh. Imkhunazarov. Notation of the Polarization Plane of Elastic Waves in Magnetically Polarized Magnetoelastic Media	41
Syrkin, L. M. Discussion of the [Preceding] Report	48
X Sirota, M. M. The Physicochemical Nature of Ferrites and Their Properties	50
X Sirota, M. M., E. A. Ovesyuk, and M. P. Tikhonovich. Some Peculiarities of the Magnetic Transformation of Ferrites at Curie Point	74
Belov, K. P., and I. Z. Lavitin. Magnetoelastic Phenomena in Antiferromagnetics	78
X Belov, K. P., V. V. Belov, A. V. Zaleskiy, and A. A. Porova. Magnetic and Spin Properties of Magnesium-Manganese Ferrite Single Crystals	83
Tilozin, A. G. Growing Ferrite Single Crystals With Structure of the Garnet Type	89

Card 4/18

85700

S/056/60/038/006/043/049/XX  
B006/B070

24.7900 (1055, 1144, 1160)

AUTHORS: Belov, K. P., Belov, V. F., Popova, A. A.

TITLE: Single Crystals of Magnesium Manganese Ferrites With a  
Narrow Ferromagnetic Resonance Absorption Curve

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 38, No. 6, pp. 1908 - 1910

TEXT: The present "Letter to the Editor" gives some experimental results obtained from some spinel-type ferrites with a narrow resonance absorption line. The line width  $\Delta H$  was measured for different magnesium manganese ferrites with different oxide ratios of Mn and Mg. The single crystals studied were bred by the method of Verneuille. The specimens were spherical in shape with a diameter of 0.8-1 mm; their surfaces were polished. The measurements were made at a frequency of 9470 Mc/sec. The results of measurement, namely, the values of  $\Delta H$ , of the saturation magnetization  $4\pi I_s$ , and of resistivity  $\rho$  are shown in Table 1. Fig. 1 shows the anisotropy of the line width in the (110) plane of a specimen having the composition last mentioned in the Table at room temperature (continuous

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85700

Single Crystals of Magnesium Manganese  
Ferrites With a Narrow Ferromagnetic  
Resonance Absorption Curve

S/056/60/038/006/043/049/XX  
B006/B070

curve). The anisotropy of  $\Delta H$  at room temperature had an amplitude of  $(3.5 \pm 0.5)$  oe. The broken line shows the anisotropy of the resonance field  $H_p$ . The anisotropy character of  $\Delta H$  is in agreement with the phenomenological calculations of G. V. Skrotskiy and L. V. Kurbatov (Ref.5). Fig.2 shows  $\Delta H$ ,  $4\pi I_s$ , and the constant of magnetic anisotropy  $K$ , as functions of  $T$  (in the temperature range  $0 - 300^\circ\text{C}$ ) for a specimen having the composition last mentioned in the Table. There are 2 figures, 1 table, and 5 references: 3 Soviet and 2 US.

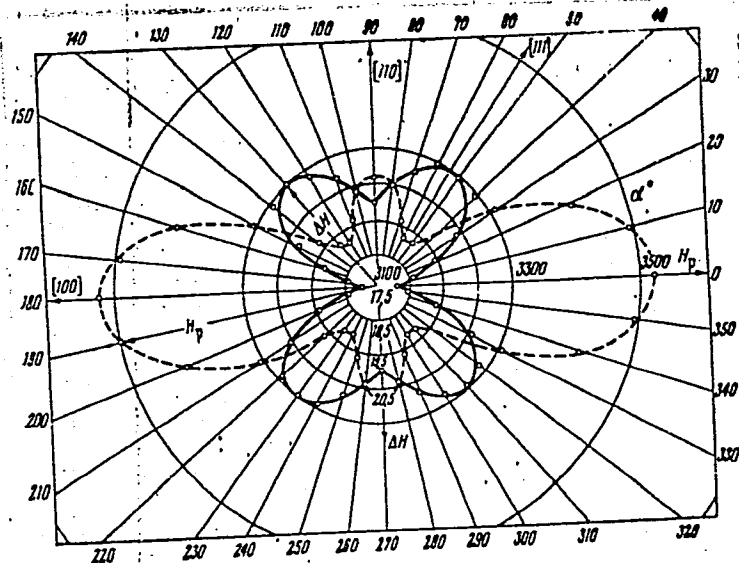
ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of  
Crystallography of the Academy of Sciences USSR)

SUBMITTED: March 18, 1960

Card 2/4



85700



S/056/60/038/006/043/042/77  
B006/B070

Fig. 1

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L 10331-63 EWA(k)/EPF(c)/EWT(1)/EWP(q)/EWT(m)/FBD/BDS/T-2/3W2/EEC(b)-2/  
ES(t)-2--AFFTC/ASD/ESD-3/RADC/APGC/AFNL--Fr-4--GO/WH/JHB/WG/K/EH/IJP(C)

ACCESSION NR: AP3001285

S/0181/63/005/006/1643/1648

AUTHOR: Manenkov, A. A.; Popova, A. A.; Khaimov-Mal'kov, V. Ya.

TITLE: Investigation of crystal-field inhomogeneity in the ruby 15

SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1643-1648

TOPIC TAGS: crystal-field inhomogeneity, ruby laser, EPR-line broadening,  
trigonal axis dispersion

ABSTRACT: Inhomogeneous EPR-line broadening<sup>2</sup> caused by local inhomogeneities of the crystal field and dispersion of the trigonal axis orientation has been used to study such inhomogeneities in the ruby and their reaction to thermal treatment. The method yielded direct information on the nature of the local crystal field around paramagnetic ions in crystals and the influence of this field on the energy levels of the ions. Relative peak intensity rather than line width was used as a measure of crystal-field inhomogeneity in various 0.05% Cr sup plus 3 ion-concentration samples. Measurements were made with an EPR radio spectroscope operating at 9400 Mc. Small samples (volume approximately 0.5 cm

Card 1/2

mcs/CA

Card 2/2

S/0070/64/009/001/0128/0129

ACCESSION NR: AP4012290

AUTHOR: Popova, A. A.

TITLE: A constant relationship in the Verneuil method

SOURCE: Kristallografiya, v. 9, no. 1, 1964, 128-129

TOPIC TAGS: Verneuil method, constant relationship, crystallization, metallic oxide, fulminating mixture, open flame, oxidation energy, hydrogen : oxygen ratio

ABSTRACT: Experiments were conducted to prove the author's assumption that there exists a direct relation between the stability of oxides and the composition of flame in which their crystallization takes place. The maximum energy of metal oxidation ( $A_{max}$ ) and the volumetric ratio of  $H_2/O_2$  fed to the burner were taken as the experimental criteria. A study of the author's previous work showed that crystalline nuclei of  $CoO$ ,  $NiO$ , and  $Fe_3O_4$  originate in the gas mixtures of 1.9-2.0:1; 2.1-2.15:1; 2.5-2.6:1. These ratios agree well with  $A_{max}$  for the corresponding oxides.  $Co_2O_3$ ,  $Ni_2O_3$ , and  $Fe_2O_3$  were melted and allowed to form crystalline  $CoO$ ,  $NiO$ , and  $Fe_2O_3$  under controlled conditions. From the results obtained a curve was plotted with  $A_{max}$  as the ordinates and  $H_2/O_2$  as abscissas. Extrapolation of this curve located the points at which  $MnO$  and  $Mn_3O_4$  should

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ACCESSION NR: AP4012290

crystallize (see Fig. 1 of the Enclosure). Further experiments proved the validity of the original assumption.  $MnO$  crystallized at  $H_2/O_2 = 4.0-4.1:1$  and  $Mn_2O_4$  at  $1.55:1$ . Apparatus used in this work had been previously described by S. K. Popov (Sb. "Rost kristallov", 2. Izd-vo AN SSSR, M., 1959, str. 140-210). "The author thanks O. K. Mel'nikov for the x-ray analysis of the specimens." Orig. art. has: 1 graph and 1 table.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography AN SSSR)

SUBMITTED: 26Apr63

DATE ACQ: 19Feb64

ENCL: 01

SUB CODE: PH, CH

NO REF SOV: 002

OTHER: 000

Card 2/12

L 09208-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) GG/JD/JG  
ACC NR: AP7002765 SOURCE CODE: UR/0020/66/169/001/0092/0093

AUTHOR: Popova, A. A.; Zotkina, V. B.

ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

TITLE: Production of single crystals of oxides of the rare earth elements by the Verneuil method

SOURCE: AN SSSR. Doklady, v. 169, no. 1, 1966, 92-93

TOPIC TAGS: rare earth metal, inorganic oxide, crystal growth  
ABSTRACT: The possibility of applying the Verneuil method to the production of oxides containing lanthanides with atomic numbers from 62 to 71 was explored, and the permissible limits of fluctuation of the gas systems of crystallization of various compositions were established. All the rare earth oxides tested, with the exception of that of terbium, acquired a trivalent state independent of the oxidation-reduction potential of the medium in the crystallization space during growth of crystals by the Verneuil method. The crystals of sesquioxides of the tested series of lanthanides, produced by the Verneuil method, belong to two classes of structural modifications:  $\text{Sm}_2\text{O}_3$  and  $\text{Gd}_2\text{O}_3$  are monoclinic, whereas  $\text{Dy}_2\text{O}_3$ ,  $\text{Ho}_2\text{O}_3$ ,  $\text{Er}_2\text{O}_3$ ,  $\text{Tm}_2\text{O}_3$ ,  $\text{Yb}_2\text{O}_3$ , and  $\text{Lu}_2\text{O}_3$  are cubic. The microhardnesses of the investigated crystals increased with increasing atomic number. An exception was  $\text{Dy}_2\text{O}_3$ , the comparatively high hardness of which is attributed by the authors to the presence of impurities of nonlanthanide elements. This paper was presented by Academician A. V. Shubnikov on 25 October 1965. The authors thank O. K. Mel'nikov for the discussions of the results of the x-ray analysis of the samples. Orig. art. has: 1 table. [JPRS: 38,139]

SUB CODE: 20, 07 / SUBM DATE: 25Oct65 / ORIG REF: 004 / OTH REF: 004

Cord 1/1 <sup>511</sup>

UDC: 518.55

0925-1643

KOGAN, R.B., dotsent, BIRYUKOVICH, A.A., kand.med.nauk. ~~POPOVA, A.A.~~

Organization of rural prophylactic observation of nursing infants.  
Sov.zdrav. 17 no.6:29-34 Je '58 (MIRA 11:6)

1. Iz Instituta organizatsii zdavookhraneniya i istorii meditsiny  
(dir. Ye.D. Ashurkov) i Instituta pediatrii (dir. - prof. O.D.  
Sokolova-Ponomareva) AMN SSSR.

(RURAL CONDITIONS

organiz. of prophylactic care for nursing inf.  
in rural cond. (Rus))

(CHILD WELFARE  
same)

POPOVA, A. A. and POPOV, V. P.

"The effect of nutritional conditions on the yield and quality of sugar sorghum," Nauch. trudy (Akad. nauk Ukr. SSR, Inst fiziologii rasteniy i agrokhimii), No. 1-2, 1948 p. 146-51

SO: U-3850, 16 June 53. (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

POPOVA, A.A.

Make better use of marshy grounds. Vistyky AN URSR 24 no.10:  
58-60 0 '52. (MLRA 9:9)

(Ukraine--Reclamation of land)



POPOVA, A. A.

Popova, A. A.

"The effect of the food factor on the development and multiplication of aphids (on the example of the green apple aphid, *Aphis pomi* Deg.)."  
Min Higher Education USSR. Leningrad Agricultural Inst. Leningrad,  
1956. (Dissertation for the Degree of Candidate in Agricultural Sciences.)

Knizhnaya Letopis'  
No. 25, 1956. Moscow.

POPOVA, A. A.

Popova, A. A. "Alimentary toxic aleukia in certain regions of Kirov Oblast in 1942-1946," Trudy Kirovskogo in-ta epidemiologii i mikrobiologii, Collection 2, 1948, p. 77-80.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949)

POPOVA, A. A.

USSR/Medicine - Paralysis, Facial      Nov 48  
Medicine - Drugs, Administration  
and Dosage

"Treatment of Paralysis of the Facial Nerve With  
Eserine," G. L. Ostapovich, A. A. Popova, Clinic  
for Nerve Diseases, Voronezh Med Inst, 1 p

"Sov Med" No 11

Describes results of administration of eserine  
(Physostigminum salicylicum, Merk, 1:1000) in  
subject affliction. Best results obtained from  
eserine administrations supplemented with adminis-  
trations of aspirin, salicylates, urotropine,  
iodine preparations, and heat treatments.

■

24/49751

POPOVA, A. A.

POPOVA, A. A. "On the clinical aspects and the pathogenesis of arthritic neurasthenia (so-called Dele's disease)", Trudy Voronezhsk. gos. med. in-ta, Vol. XVIII, 1947, p. 65-76.

CC: U-1431, 16 Sept 53, (Leningrad: Zhurnal 'Sveti Stroy', No. 24, 1947).

BOLOTINA, O.P.; POPOVA, A.A.

Effect of phenamine upon conditioned motor reflexes to time in the  
lower apes. Trudy Inst.fiziol. no.2:64-68 '53. (MLRA 7:5)

1. Laboratoriya sravnitel'noy fiziologii vysshey nervnoy deyatel'nosti  
(zaveduyushchiy - L.G.Voronin). (Phenocoll) (Conditioned response)

L 29188-66 EWT(1)/T JK

SOURCE CODE: UR/0016/65/000/011/0138/0138

ACC NR: AP6019122

AUTHOR: Trukhan, P.T.; Tishchenko, I.T.; Stankevich, L.A.; Popova, A.A.; Dobrovskaya, A.R.

ORG: Kiev Institute for the Advanced Training of Physicians (Kiyevskiy institut usovershenstvovaniya vrachey); Kiev Municipal Sanitary-Epidemiological Station (Kiyevskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya); Podol'skiy Area Sanitary-Epidemiological Station, Kiev (Sanitarno-epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva)

TITLE: Use of gamma globulin to prevent infectious hepatitis in children. II. Results of epidemiological observations among groups of children. This paper was presented at the meeting of the Kiev City Society of Microbiologists, Epidemiologists and Infectious Diseases Specialists on 30 September 1964

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 11, 1965, 138

TOPIC TAGS: gamma globulin, hepatitis, epidemiology, immunization, man

ABSTRACT: In September 1963 some 5000 children in nurseries, kindergartens, and grade schools in Kiev were immunized with a single 3 ml dose of human gamma globulin while an equal number served as controls. The observation period of 12 months consisted of two intervals: (1) October 1963 to May 1964 and (2) June to September 1964. The incidence of hepatitis among the

Card 1/2

L 29188-66

ACC NR: AP6019122

immunized children was one-third that in the controls, and there were five times fewer cases during the first interval than in the controls and half as many cases during the second interval. The effectiveness of the gamma globulin subsequently decreased, apparently because of a weakening of immunity.

To check the epidemiological effectiveness of gamma globulin injections, some 1,600 children were immunized with the substance while an equal number served as controls. After 8 months of observation the hepatitis rate was one-seventh of that prior to immunization, suggesting that a fairly high level of immunity can be created with an immune layer of 50%.

The authors concluded that human gamma globulin is a useful means of preventing infectious hepatitis. September is the best month to administer it in Kiev because the fall and winter are the most dangerous seasons for the disease. In addition to the principal authors, the following epidemiologists of the Podol'skiy Area Sanitary-Epidemiological Station, Kiev, took part in the organization of the work and the observations: M. P. Petrova, A. A. Ryazanskaya, S. P. Trigubov, A. M. Rabinovich and S. S. Geler. /JPRS/

SUB CODE: 06/ SUBM DATE: 02Nov64 /

Card 2/2

BLG

UDC: 616.36-002.12-084.47:615.373.37-053.2

L 29188-66 EWT(1)/T JK

SOURCE CODE: UR/0016/65/000/011/0138/0138

ACC NR: AP6019122

AUTHOR: Trukhan, P.T.; Tishchenko, I.T.; Stankevich, L.A.; Popova, A.A.; Dobrovskaya, A.R.

ORG: Kiev Institute for the Advanced Training of Physicians (Kiyevskiy institut usovershenstvovaniya vrachey); Kiev Municipal Sanitary-Epidemiological Station (Kiyevskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya); Podol'skiy Area Sanitary-Epidemiological Station, Kiev (Sanitarno-epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva)

TITLE: Use of gamma globulin to prevent infectious hepatitis in children. II. Results of epidemiological observations among groups of children. This paper was presented at the meeting of the Kiev City Society of Microbiologists, Epidemiologists and Infectious Diseases Specialists on 30 September 1964.

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TOPIC TAGS: gamma globulin, hepatitis, epidemiology, immunization, man

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Card 1/2



L 29188-66

ACC NR: AP6019122

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To check the epidemiological effectiveness of gamma globulin injections, some 1,600 children were immunized with the substance while an equal number served as controls. After 8 months of observation the hepatitis rate was one-seventh of that prior to immunization, suggesting that a fairly high level of immunity can be created with an immune layer of 50%.

The authors concluded that human gamma globulin is a useful means of preventing infectious hepatitis. September is the best month to administer it in Kiev because the fall and winter are the most dangerous seasons for the disease. In addition to the principal authors, the following epidemiologists of the Podol'skiy Area Sanitary-Epidemiological Station, Kiev, took part in the organization of the work and the observations: M. P. Petrova, A. A. Ryazanskaya, S. P. Trigubov, A. M. Rabinovich and S. S. Geler. /JPRS/

SUB CODE: 06/ SUBM DATE: 02Nov64 /

Card 2/2

BLG

UDC: 616.36-002.12-084.47:615.373.27-053.2

L 63478-65 EWT(-) BIAAF  
ACCESSION NR: AR5003766

S/0272/64/000/010/0126/0126.7  
389:539.16.07:551.510.04 B

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika. Otd. vyp., Abs. 10.32.797

AUTHOR: Zhelaznova, Ye. I. Popova, A.A.

TITLE: Using the scintillation alpha-chambers in <sup>19</sup>dosimetry work

CITED SOURCE: Byul. nauchno-tekhn. inform. Gos. geol. kom-ta SSSR. Otd. nauchno-tekhn. inform. VIMSa, no. 6(50), 1963, 70-73

TOPIC TAGS: scintillation alpha chamber, dosimetry, radon dosimeter

TRANSLATION: Using the scintillation alpha-chambers for determining low radon concentrations (under  $10^{-12}$  curies/lit) in air-contamination dosimetry is reported. The chamber size was selected on the basis of the maximum alpha-particle range and air-sampling conditions. It was found experimentally that, in measuring small quantities of radon, the vacuum method of air sampling must be replaced by the activated-carbon method of sampling. This enhances the sensitivity of determining radon concentration.

SUB CODE: NP, EC  
Card 1/1 *rig*

ENCL: 00

POPOVA, A.A.

On a certain regularity in Verneuil's method. Kristallografiia  
9 no.1:128-129 Ja-F '64. (MIRA 17:3)

1. Institut kristallografi AN SSSR.

LAVSKIY, G.K., prof.; KORNOPELEVA, Ye.N.; POPOVA, A.A. [deceased];  
KOLPASHCHIKOVA, L.P.

Electric anesthesia in treating hypertension. Terap.arkh. 31 no.4:  
62-70 Ap '59. (MIRA 14:5)

1. Iz bol'nitsy 4-go Glavnogo upravleniya Ministerstva zdravookh-  
raneniya SSSR, Moskva.  
(ELECTRIC ANESTHESIA) (HYPERTENSION)

Country : USSR  
 Category : Soil Science. Physical and Chemical Properties of Soils. J  
 Abs Jour : RZhBiol., No 6, 1959, No 24611  
 Author : Batalin, A. Kh.; Bogdanova, Ye. S.; Popova, A. A.; Sadvinskaya, L. V.; Filimonova, Z. G.; Khmelevskaya, N. A.; Shtark, P. A.  
 Inst : All-Union Chemical Society imeni D. I. Mendeleev  
 Title : The Contents of Boron, Cobalt, Copper, Molybdenum, Nickel, Manganese and Fluorine in Certain Soils of the Sorochinskiy Rayon in Chkalovskaya Oblast.  
 Orig Pub : Vest. Chkalovskogo obl. otd. Vses. khim. o-va im. D. I. Mendeleeva, 1957, vyp. 7, 7-9  
 Abstract : Determination of the microelements was conducted in the arable and subarable horizons of chernozem soils under different cultivations.  
 Card : 1/3

Country : USSR  
 Category : Soil Science. Physical and Chemical Properties of Soils.

APPROVED FOR RELEASE: 08/25/2000 1959 No 24611  
 Abs Jour : RZhBiol., No 6, 1959, No 24611

Author :  
 Inst :  
 Title :  
 Orig Pub :

Abstract : Analyses were conducted according to the methods of the Institute of Geochemistry and Analytical Chemistry AS USSR. The contents of the microelements fluctuate percentage-wise: B, 0.000053-0.0017; Co, 0.000045-0.00045; Cu, 0.0002-0.011; Mo, 0.00011-0.036; Ni, 0.0000018-0.00064; Mn, 0.0027-0.067; F, 0.0013-0.061. The quantity of the microelements in the in-

Card : 2/3

*BC*

*POPOVA, A. T.*

*B-II-8*

Rapid calorimetric control of the chamber and tower (cathodic acid) processes. I. N. Kuznetsov, R. J. Tschumak, and A. A. Popova (Zavod. Lab., 1960, 6, 418-421). The [NO<sub>x</sub>] of the gases is determined calorimetrically in tubes 20-100 cm. in length.  
R. T.

POPOVA, A.A.; EDEL'SHTEYN, A.Ya.

Practice in studying spore-pollen remains in petroleum of  
the Valensk oil field. Izv.AN Mold.SSR no.7:75-80 '64.  
(MIRA 18:12)

POPOVA, A.B., uchitel'nitsa khimii (g. Kharmanli, Narodnaya Respublika  
Bolgariya)

Chemical evening on the topic "Catalysis." Khim.v shkole 18  
no.2:80-81 Mr-Apr '63. (MIRA 16:4)  
(Bulgaria--Chemistry--Study and teaching)  
(Catalysis)



ORZHESHKOVSKIY, V.V.; SHILYAYEVA, T.I.; POPOVA, A.D.

Significance of the Thorn test in ACTH treatment of patients with  
infectious nonspecific polyarthrititis. Sov.med. 23 no.11:43-45 N '59.  
(MIRA 13:3)

1. Iz Sochinskogo nauchno-issledovatel'skogo instituta revmatizma  
(direktor - prof.M.M. Shikhov) Ministerstva zdravookhraneniya RSFSR.  
(ARTHRITIS, RHEUMATOID therapy)  
(CORTICOTROPIN therapy)  
(ADRENAL CORTEX funct. tests)

TSVERIANISHVILI, G.K.; FILINOV, D.N.; POPOVA, A.D.

Diagnostic value of Valdman's cup endothelial test in rheumatic  
fever. Vrach.delo no.10:123-124 0 '60. (MIRA 13:11)

1. Sochinskiy institut revmatizma.  
(RHEUMATIC FEVER)

FILINOV, B.N.; TSVERIANISHVILI, G.K.; POPOVA, A.D.

Diagnostic value of local leucocytosis in rheumatic heart lesions.  
(MIRA 15:1)  
Sov. med. 25 no.6:136-138 Je '61.

1. Iz kardiologicheskoy kliniki (zav. - dotsent N.M.Shikhova),  
kliniki aktivnogo revmatizma (zav. - prof. M.M.Shikhov) i kliniko-  
biokhimicheskoy laboratorii (zav. - dotsent V.A.Tikhonravov)  
Sochinskogo nauchno-issledovatel'skogo instituta revmatizma (dir. -  
prof. M.M.Shikhov).  
(RHEUMATIC HEART DISEASE) (LEUCOCYTOSIS)

POPOVA, A. F.  
Min Health RSFSR. Kuybyshev State Medical Inst. Chair of Hospital Surgery.

POPOVA, A. F.\* "Some problems in the treatment of chronic hematogenic osteomyelitis."  
Min Health RSFSR. Kuybyshev State Medical Inst. Chair of Hospital Surgery.  
Kuybyshev, 1956.  
(Dissertation for the Degree of Candidate in Medical Sciences)

SP; Knizhnaya Letopis' No. 20, 1956

POPOVA, A.G.

Effect of wind velocity on the distribution of wave elements.  
Vest.Mosk.un.Ser.mat., mekh., astron., fiz., khim. 14 no.3:  
83-92 '59. (MIRA 13:5)

1. Kafedra fiziki morya i vod sushi Moskovskogo gosudarstvennogo  
universiteta.

(Waves)

ACCESSION NR: AT4010229

S/3056/63/000/000/0085/0091

AUTHOR: Ivanov, V. N.; Popova, A. G.

TITLE: Experimental determination of statistical moments

SOURCE: Issledovaniye nizhnego 300-metrovogo sloya atmosfery\*. Moscow, 1963, 85-91

TOPIC TAGS: meteorology, statistical moment, meteorological field, wind velocity, air temperature, lower atmosphere, turbulence

ABSTRACT: In using statistical moments to evaluate quantitative observations of turbulent fields of velocity, temperature, etc., moments of higher than second order must be employed for the less pronounced attributes of random processes. In the present article a method is cited which uses the values distributed in the vicinity of the center of gravity of distribution rather than the unlikely values given by the distribution law. A system of numerical calculation is presented which is less sensitive to experimental errors. Mathematical substantiation of the method is provided in the form of tables, graphs, and formulas. As an example, the variations in air temperature at an altitude of 25 meters

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ACCESSION NR: AT4010229

around some arbitrary zero point are examined. The distribution of pulses in the longitudinal components of wind velocity is considered, and mathematical expressions are derived for determining the asymmetry and the Rayleigh excess; in the first case the error was about 27% and in the second about 30%, both values permissible in a number of cases arising in practice. Orig. art. has: 2 tables, 5 graphs, and 18 formulas.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: AS, MM

DATE ACQ: 20Feb64

NO REF SOV: 000

ENCL: 00

OTHER: 000

Card 2/2

3.4000  
10.4000  
~~46 (1)~~, ~~3 (9)~~  
AUTHOR:

Popova, A. G.

58943  
SOV/55-59-3-11/32

TITLE:

The Influence of  $\sqrt{v}$  Wind Velocity on the Distribution of  $\sqrt{v}$  Wave Elements

PERIODICAL:

Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 3, pp 83 - 92 (USSR)

ABSTRACT:

The author endeavored to find out by direct observation of wave formation whether the wind velocity actually exerts an essential influence on the distribution of wave elements on the surface of a container of water. Yu. M. Krylov (Ref 1) and I. S. Brovnikov (Ref 2) already previously gave an expression for the probability density of the deviation of a buoy used for purposes of measurement from its resting position and also for the integral distribution function of this quantity. At the Chernomorskoye otdeleniye Morskogo gidrofizicheskogo instituta AN SSSR (Krym, Katsivali) (Black Sea Department of the Maritime Institute of Hydrophysics of the AS USSR, Crimea, Katsivali) and immediately on the Black Sea, a profile of the wind-waved surface of a water container that was sufficiently independent of distortions due

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The Influence of Wind Velocity on the Distribution of Wave Elements SOV/55-59-3-11/32

to apparatus was obtained. The waves were recorded through the glass window of the basin by means of the method of slot photography first developed by A. N. Krylov (Ref 6). In August and September 1957 measurements were carried out on the open sea by means of a wave recorder. The operation of the wave recorder constructed by the author is discussed. The agitated surface of the sea was recorded at three different wind velocities: 9.5, 6.4, and 3 m/sec. With decreasing wind velocity the integral curves of the distribution of heights and periods of the waves on the surface of the storm basin become steeper with respect to the axes of the heights and cease at lower heights  $h$  of the waves. The integral curves constructed for the periods do not show so marked a dependence on wind velocity. The character of probability densities depends essentially on wind velocity. In the case of an unsteady agitation of the sea, the spectral range of heights was narrower and the elements of the developing wave were lower than the elements of the wave which is steady at the same wind velocity. The curves of the probability densities of heights and periods determined by the author are shifted with respect to one another by asymmetric curves, which is indicative

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The Influence of Wind Velocity on the Distribution of Wave Elements SOV/55-59-3-11/32

of a considerable influence being exerted by wind velocity upon the distribution of wave elements. Each curve for the probability density of the logarithms of the heights  $h$  and the periods  $\tau$  for various wind velocities may be represented by functions of

the kind  $f(x) = \frac{1}{\sqrt{2\pi\alpha}} e^{-\frac{(x-\beta)^2}{2\sigma^2}}$ , where  $x = \lg h$  or  $x = \lg \tau$  holds.

The parameter  $\alpha$  determines the absolute amount of the maximum of each curve,  $\beta$  - the shift of the curve along the abscissa axis, and  $\sigma$  - the width of the spectrum. The parameters  $\alpha, \beta$ , and  $\sigma$  increase with an increase of wind velocity. The functions  $f(\lg h)$  and  $f(\lg \tau)$  for the storm channel, the storm basin, and for the open sea are explicitly written down. The mean square height of the wave determining the mean energy of the gravitational waves is proportional to the second power of the wind velocity. There are 8 figures, 2 tables, and 9 references, 5 of which are Soviet.

Card 3/4

POPOVA, A.I., kandidat tekhnicheskikh nauk, dotsent; SHCHERBAKOV, I.M.,  
kandidat tekhnicheskikh nauk, dotsent.

Regeneration of metals and salts in worn-out electrolytes.  
Trudy MVTU no.36:41-48 '55. (MLRA 9:9)

(Electrolytes)

POPOVA, A.I.

Beryllometer. Razved. i okl. nedr 26 no.4:61 Ap '60. (MIRA 15:7)

1. Vsesoyuznyy geologicheskiy fond.  
(Beryllium) (Radioactive prospecting—Equipment and supplies)

POPOVA, A.I.

CA

12

Souring of prepared soups under the influence of streptococci and *Bacterium proteus*. L. A. Nikitina, A. I. Popova, A. P. Spirina and M. K. Pokina. *Voprosy Pisheniya* 7, No. 6, 131-7 (1938); *Chem. Zentr.* 1939, II, 3350. —The pH of meat broths of good quality should be 6.2-6.6; that of soups should be 6-6.5. About 6 hrs. after the prepn. of the soup or broth the growth of microorganisms is observed. As a rule a lactic fermentation takes place under the influence of streptococci, which is particularly vigorous at high storage temps. *B. proteus* has a souring rather than a putrefactive action, while accompanying organisms which may be present, such as *Micrococcus aerogenes*, *B. anthracoides* and *B. mycoides* have no harmful effect.

M. G. Moore

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL SYMBOLS

SEARCHED SERIALIZED

COLLATION

REGIONAL SYMBOLS

**CA POPOVA, A.I.**

The application of emulsions of petroleum and tar oils for the control of pests of agricultural crops. *Abad Sel'sko-Khoz. Nauch Lenina, Moscow 1939, 95 pp. (in Russian).* The action of mineral oil emulsions on plants. Z. M. Eldel'man. *Ibid.* 29-40; cf. C. A. 35, 1174. Greenhouse tests and field expts. in Sukhum showed that oils for use in spraying citrus in summer should be of low viscosity (1.5-1.8° Engler at 50°) and contain not more than 2-3% sulfonatable compds. (I). Presence in the oil of a considerable quantity of I sharply reduced the intensity of photosynthesis, transpiration and respiration of the leaves, and the duration of this disorganization increased with the viscosity of the oil (up to 6° in the expts.) regardless of degree of refinement. Defoliation of apple trees by oil sprays was less for trees growing in moist soil than for those in dry soil. This was due to the presence in the cell walls and intercellular spaces of more water, which interferes with the penetration of oil into the tissues. The use of petroleum oil emulsions for the control of the San José scale—*Aspidiotus perniciosus* Comst. A. I. Popova. *Ibid.* 41-53. From extensive tests in the Black Sea and Krasnodar regions it is concluded that mineral oils will reduce a scale infestation on fruit trees only if the trees are in good condition and clean cultivation is maintained. Two winter sprays of 4% oil emulsion, combined with clean cultivation, resulted in 99.1-100% mortality of the scale on apples and plums, compared with only 30.3% in the controls; the yield of uninfested fruit was 94.5%. Applications to apple in the summer of 1% emulsions of machine-oil distillate and of alkalinized spindle-oil distillate

both gave poor control, while 2% emulsions weakened the leaves. Control of the San José scale on the Mallop Experiment Station during the years 1934-1936. K. V. Petrukhin. *Ibid.* 54-8. Spraying infested apple and pear trees 2-6 yrs. old late in July and again early in Oct. with a 2% emulsion of a machine-oil distillate gave about 70% control of the scale and did not injure the leaves. In other orchards apple trees 10 yrs. old were slightly scorched. Experiments in the comparative study of the action of petroleum, coal-tar and schist oils on the eggs of the apple sucker—*Psylla mali*. N. A. Ivanova. *Ibid.* 59-64. Sprays contg. petroleum, coal-tar or schist oils were applied to apple trees in the Province of Voronezh during April before the buds opened. The oils were emulsified with soft soap at 3 lb. soap to 2 gal. oil. Heavy coal-tar oils gave complete control of the eggs of *P. mali* Schm.; 2 highly refined petroleum oils were very effective, but slightly refined petroleum oils and schist oils gave poor results. The better of the 2 highly refined petroleum oils (green oil T), which practically freed the trees from infestation when used at 2% concn., was rich in aromatic compds. and was easier to use than the coal-tar oils because of its greater uniformity on cooling. The use of petroleum-oil emulsions for the control of pests of subtropical cultivated plants in the humid subtropics. T. A. Georgobiani. *Ibid.* 65-70. In expts. against citrus pests in Transcaucasia a 1% machine oil emulsion killed up to 97% of *Pulemaria aurantii* Ckll. and up to 80% of coccids of the genera *Chrysomphalus*, *Aonidiella* and *Lepidosaphes* and mites. Mealy bugs and *Ceroplastes* spp. were very resistant. Oil for citrus spraying in the

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

POPOVA, A. I.

POPOVA, A. I.: "Material on the history of development of the flora of Central yakutiya in the Quaternary period". (Based on data from spore and pollen analysis). Yakutsk, 1954. Yakutsk Affiliate, Acad Sci USSR. (Dissertations for the Degree of Candidate of Biological Sciences.)

So: Knizhnaya letonis' No. 49, 3 December 1955. Moscow.

POPOVA, A. I.

"Information on the History of the Development of the Vegetation of Central Yakutsk in the Quaternary Period (According to Spore-Pollen Analysis)."  
Cand Geol Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov, Moscow,  
21 Jan 55. (VM, 11 Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55



~~POPOVA, A.I.~~

Spore and pollen analysis of Quaternary deposits of central Yakutia in connection with the history of development of its vegetation during the post-Tertiary period. Trudy Inst.biol.IAk.fil. AN SSSR no.1:136-146 '55. (MIRA 10:1)

(Yakutia--Paleobotany, Stratigraphic)

KARAVAYEV, M.N.; POPOVA, A.I.

New data on the spore and pollen analysis of Neocene deposit of  
Northeastern Asia. Biul.MOIP.Otd.biol. 60 no.6:107-113 N-D '55.  
(MLRA 9:3)

(SIBERIA, EASTERN--GEOLOGY, STRATIGRAPHIC)

COUNTRY : USSR  
 CATEGORY : Microbiology. Sanitary Microbiology.  
 ABS. JOUR. : Ref Zhur-Biologiya, No.4, 1959, No. 14035  
 AUTHOR : Sirotnina, O.N.; Spirina, A.P.; Popova, A.I.  
 INST. : Moscow Sci.Res.Inst.of Sanitation and Hygiene  
 TITLE : Methods of Direct Detection of Bacterial Toxins in Food Products.

REG. PUB. : Inform. byul. Mosk. n.-i. in-to sanitarii i  
 gigiye, 1957, No.9, 47-49

ABSTRACT : The precipitation reaction was used for the direct isolation of bacterial toxins in products contaminated by agents of watermelon toxins or proteus. Antitoxin sera were obtained by immunizing rabbits with exo- and endotoxins of different strains of both organisms. The test fluid was superimposed on 0.3 ml of undiluted serum in narrow precipitation tubes. In positive cases the ring or sediment was obtained after 15 - 30 minutes

CARD: 1/2



POPOVA, A.I.

Methods of mass reproduction of Prospaltella perniciosus Tow., the  
parasite of San Jose scale. Trudy VIZR no.20 pt.1:61-64 '64.  
(MIRA 18:10)

L 2927-66 EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/ENA(h)/EWA(1) RIL WW/GG/RM  
 ACCESSION NR: AP5022607/445 UR/0190/65/007/009/1597/1603  
 66.095.26+678.742 445 445 445  
 AUTHORS: Popova, A. I.; Sheynker, A. P.; Abkin, A. D. 445 445 445  
 TITLE: Radiation polymerization of isobutylene in various solvents 445 445 445  
 SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1597-1603  
 TOPIC TAGS: polymer, radiation polymerization, gamma radiation, isobutylene, inhibitor radiolysis, diisobutylene  
 ABSTRACT: The kinetics of radiation polymerization of isobutylene was investigated in methylene chloride, difluorodichloromethane, tetrafluoromethane, acetone, ethylpropylketone, and tetrahydrofuran. The preparation of test specimens and the experimental procedure are described. The polymerization was carried out at a monomer concentration ranging from 0.5 to 12.0 mole/liter, at -78C, 70 rad/sec. It was found that the rate of polymerization for isobutylene in methylene chloride and difluorodichloromethane at -78C under the effect of gamma rays is higher than in bulk polymerization. The rate of polymerization of isobutylene is decreased by the addition of previously irradiated polyisobutylene. The inhibitor of

Card 1/2

Card 2/2

POPOVA, A. I.

"History of development of quaternary vegetation in Yakutiya."

report submitted for the 7th Intl Cong, Intl Assoc for Quaternary Research, Boulder & Denver, Colorado, 30 Aug-5 Sep 65.

L 15630-65 EWG(j)/EWG(r)/EWT(1)/EWT(m)/FS(v)-3/EPF(c)/EWG(v)/EWP(j)/T/EWG(a)/  
 EWG(c)/EWA(h)/EWA(1) Pb-4/Pc-4/Pe-5/Pr-4/Pab ASD-3/AFPC/AFMDC/AMD/APGC/ESD(gs)/  
 ESD(t)/ASD(m)-3/AS(m)-2/AFETR DD/RM S/0020/64/157/095/1192/1195  
 ACCESSION NR: AP4043843

AUTHOR: Popova, A. I.; Sheynker, A. P.; Abkin, A. D.

TITLE: On the mechanism of radiation induced polymerization of isobutylene  
 and styrene in the presence of solid admixtures

SOURCE: AN SSSR. Doklady\*, v. 157, 1964, 1192-1195 N. 5

TOPIC TAGS: polymerization, copolymerization, radiation polymerization, iso-  
 butylene, styrene, solid admixture, glass powder, zinc oxide, polymerization  
 temperature, radical mechanism, ionic mechanism, carbonium ion, polymeriza-  
 tion constant, alkyl halide

ABSTRACT: The role of solid admixtures in such reactions was explored in  
 the separate and copolymerization of the title products under the influence of  
 gamma rays (70 rad/sec.,  $\text{Co}^{60}$ ) at 0°C; using as admixtures glass powder or  
 ZnO in quantities corresponding in volume to the volume of the liquid phase.  
 The kinetics of separate polymerization was studied with the dilatometer, copoly-

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merization was conducted in ampuls. Results are compared with those published earlier, relating to tests at -78C. At 0C glass had no influence on polymerization while that of ZnO was considerable. The latter catalyzed isobutylene polymerization rapidly, also without irradiation, and its influence increased with time. The molecular weight obtained was about 20,000. Isobutylene and styrene copolymers obtained at 0C with irradiation but without ZnO were styrene-enriched, which points towards a radical reaction mechanism. Copolymerization with ZnO led to isobutylene-enriched copolymers, pointing towards a ionic reaction mechanism. The copolymerization constants for 0C were 3.3 and 0.2 resp. for isobutylene and styrene with ZnO, 0.5 and 3.7 without ZnO. Decreasing the addition of either monomer led to a considerable decrease of the copolymerization rate. This latter was always lower than that of the separate polymerization reactions. The probable reasons are discussed. It was concluded that radiation-induced copolymerization at 0C proceeds by the radical mechanism in the absence of ZnO, by the ionic mechanism in its presence; the latter apparently increases the life of the carbonium ion in the reaction. This would confirm earlier assumptions on the role played by the surface in the development of

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ionic radiation polymerization, probably related to the interaction of monomers with the protons forming in the chemi-adsorbed layer. Detailed data on the effect of alkyl halides on such reactions will be forthcoming. Orig. art. has: 4 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpov (Physico-Chemical Institute)

SUBMITTED: 25Mar64

ENCL: 00

SUB CODE: GC

NO REF SOV: 008

OTHER: 002

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POPOVA, A.I.; SHEYNKER, A.P.; ABKIN, A.D.

Mechanism of the radiation-induced polymerization of isobutylene  
and styrene in the presence of solid addition agents. Dokl.  
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State of the corneal nerves in burns of the eye. Trudy mol. nauch.  
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1. Iz kliniki glaznykh bolezney (zav. prof. D.I.Berezinskaya)  
Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo  
instituta imeni Vladimirovskogo.

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